

REMARKS

In the March 24, 2005 Office Action, the Examiner noted that claims 1-24 were pending in the application; objected to claim 10; rejected claims 4, 5 and 10 under the second paragraph of 35 USC § 112; rejected claims 1-3, 5-7, 15, 17 and 24 under 34 USC § 102(e); and rejected claims 4, 8-14, 16, and 18-23 under 35 USC § 103(a). In rejecting the claims, the Examiner cited U.S. Patents 6,539,118 to Murray et al.; 6,269,188 to Jamali; 6,327,386 to Mao et al.; 6,557,115 to Gillenwater et al.; and 6,473,754 to Matsubayashi et al. (References A-E). Claims 1-24 remain in the case. The Examiner's rejections are traversed below.

Claim Objections

In item 1 on page 2 of the Office Action, the Examiner objected to claim 1 due to the capitalization of the indefinite article after the beginning of the claim. Claim 10 has been amended in response. Withdrawal of the objection is respectfully requested.

Rejections under 35 USC § 112, Second Paragraph

In items 3-5 on pages 2-3 of the Office Action, the Examiner rejected claims 4, 5 and 10 "for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention." Claims 4, 5 and 10 have been amended in response. If the changes made are not deemed to recite the invention with adequate specificity, the Examiner is respectfully requested to contact the undersigned by telephone to arrange an Examiner Interview prior to issuing another Office Action, so that the process of finding acceptable claim language can be expedited.

Rejections under 35 USC § 102(e)

In item 7 on pages 4-5 of the Office Action, the Examiner rejected claims 1-3, 5-7, 15, 17 and 24 under 35 USC § 102(e) as anticipated by Murray et al. It is clear from a quick review of Murray et al., that this rejection could only be the result of misunderstanding the invention or interpreting the claims in a manner inconsistent with the specification. As stated in its title, Murray et al. is related to "evaluating character sets of a message containing a plurality of character sets." As illustrated in Fig. 1 of Murray et al., the message is a "textual message" (block 116) received via the Internet. "It should be noted that[Murray et al.] presupposes that the characters of the textual message 116 are available internally in a universal character set format ... that can be used to encode a large number of alphabets" (column 3, lines 49-53). Two

such character sets are discussed in Murray et al., "16-bit Unicode, and LMBCS (Lotus Multi-Byte Character Set)" (column 3, lines 55-56).

The present invention, on the other hand, is directed to "recognition" (claim 1, line 1) of characters. The only element recited in claim 1 that utilizes encoded character sets is the "key character code extraction unit" recited on lines 2-4 which refers to "a character code" (claim 1, line 4). Claim 1 has been amended to clarify that the remaining elements operate on "an image of the character string" (claim 1, line 5) which in the specification and original claims was referred to as a "character string image" (see, e.g., the input to block 2 in Fig. 1 and the input to block 12 in Figs. 2 and 3). As indicated in Fig. 2, the present invention is particularly useful with "handwritten character string" images.

In rejecting claim 3 which was the first original claim to recite "a character string image" (see the original language on line 2 of currently amended claim 3), Fig. 2 and column 6, lines 26-58 of Murray et al. was cited. It is unclear what in Fig. 2 was being cited as operating on a character string **image**. The cited portion of column 6 contains a description of a "function EvaluateTextMessage" (column 6, line 27). This function operates on "the electronic textual message 116" (column 6, lines 29-30) which as noted above is a text encoded using Unicode or LMBCS which use a character set representing each character by a sequence of bits, and does not contain a "character string image" as previously recited in claim 3 or "an image of the character string" as now recited on line 5 of claim 1. It is submitted that one of ordinary skill in the art of recognition of words in "images of individual characters" (claim 1, lines 5-6) would not look to Murray et al. for suggestions on how to perform such recognition. Any superficial similarities in the operations recited in the claims and disclosed by Murray et al. are irrelevant. For the above reasons, it is submitted that claim 1 and claims 2, 3 and 5-7 which depend therefrom patentably distinguish over Murray et al.

Claim 15 recites the operations performed by the elements of claim 1 as functions performed by means-plus-function elements. Therefore, it is submitted that claim 15 patentably distinguishes over Murray et al. for the reasons discussed above with respect to claim 1.

Claim 17 has been amended to recite that the operations performed by the key character/word extraction unit includes "separating an image of the character string into images of individual characters, [and] recognizing the individual character images" (claim 17, lines 3-4). As discussed above with respect to claim 1, there is no suggestion in Murray et al. regarding how to perform either of these operations. Therefore, it is submitted that claim 17 patentably distinguishes over Murray et al.

Claim 24 is directed to a storage medium storing a program that causes a computer to perform the operations recited in claim 1. Therefore, it is submitted that claim 24 patentably distinguishes over Murray et al. for the reasons set forth above with respect to claim 1.

Rejections under 35 USC § 103(a)

In item 9 on pages 5-6 of the Office Action, claim 4 was rejected under 35 USC § 103(a) as unpatentable over Murray et al. in view of Gillenwater et al., the later of which is directed to a "real-time test controller." No suggestion of any application of such a controller to recognition of "a character string image" or "an image of a character string" was cited or found in Gillenwater et al. Therefore, since claim 4 depends from claim 1, it is submitted that claim 4 patentably distinguishes over Murray et al. in view of Gillenwater et al. for the reasons discussed above with respect to claim 1.

In item 10 on pages 6-7 of the Office Action, claims 8 and 10 were rejected under 35 USC § 103(a) as unpatentable over Murray et al. in view of Jamali. Unlike Murray et al., Jamali is related to optical character recognition. However, nothing was cited and nothing has been found in Jamali suggesting modification of Murray et al. to perform recognition of images of a character string as recited in claim 1. Furthermore, it is submitted that Jamali, by itself or in combination with Murray et al. does not teach or suggest an optical character recognition system that performs the operations recited in claim 1.

In rejecting claims 8 and 10, Figs. 5b and 5c and column 9, lines 11-40 of Jamali were cited. The cited drawings, like the title of Jamali relate to the "accuracy" of the character recognition. As noted in the Abstract, Jamali discloses "a system with multiple character recognition techniques ... [which] compare[s] the accuracy values ... of different versions of ... word groupings to find the most accurate version." Neither claim 8 nor claim 10, or claim 1 from which claims 8 and 10 depend recites the use of multiple techniques, word grouping or determining the accuracy of either.

The cited portion of column 9 of Jamali describes the use of "a stored list ... containing technical words and acronyms" (column 9, lines 27-28) to aid in determining whether a word is accurately recognized. No suggestion has been found in the cited portion of Jamali of "a dictionary in which a word easily **misrecognized** as the key word is entered as a similar word" (claim 8, last two lines, emphasis added) to aid in recognition of words, as opposed to reducing the recognition prediction of words that may be inappropriately recognized, as taught by the cited portion of Jamali. Furthermore, no suggestion was found of storing a "character which is not

easily misrecognized" (claim 10, line 2). Therefore, the additional feature recited in claim 10 does not appear to be disclosed by the portion of Jamali cited in rejecting claim 10.

For the reasons set forth above, it is submitted that claim 1 and claims 8 and 10 which depend therefrom patentably distinguish over any combination of Murray et al. and Jamali.

In item 11 on pages 7 and 8 of the Office Action, claims 9, 11, 16 and 20-22 were rejected under 35 USC § 103(a) as unpatentable over Murray et al. in view of Matsubayashi et al. Like Murray et al. and Gillenwater et al., Matsubayashi et al. is not related to recognizing an image of a character string as recited in claim 1. Therefore, it is submitted that claim 1 patentably distinguishes over the combination of Murray et al. and Matsubayashi et al. for the reasons set forth above with respect to Murray et al. taken alone. Since claims 9 and 11 depend from claim 1, even if Matsubayashi et al. discloses something relevant to the features recited therein, it is submitted that claims 9 and 11 patentably distinguish over Murray et al. in view of Matsubayashi et al. for at least the reasons discussed above.

Claim 16 has been amended to add the key word extraction unit recited in claim 1. Since neither Murray et al. nor Matsubayashi et al. discuss operations on "an image of a character string" (claim 16, line 8) or "recognizing the individual character images in the character string" (claim 16, line 9), it is submitted that claim 16 patentably distinguishes over Murray et al. in view of Matsubayashi et al. for reasons similar to those discussed above with respect to Murray et al. taken alone.

Claims 20 and 22 are respectively directed to a method and a computer-readable storage medium storing a program for performing the method recited in claim 20. Claims 20 and 22 have been amended to add a second operation similar to that recited at the end of claim 21. This operation relates to "recognizing individual character images in an image of a character string" (e.g., claim 20, line 6). As discussed above, neither Murray et al. nor Matsubayashi et al. relate to recognizing images of characters. Therefore, it is submitted that claims 20-22 patentably distinguish over Murray et al. in view of Matsubayashi et al.

In item 12 on pages 9-10 of the Office Action, claims 12-14, 18 and 19 were rejected under 35 USC § 103(a) as unpatentable over Murray et al. in view of Mao et al. Like Jamali, Mao et al. is related to recognition of characters, in this case handwritten cursive text.

It is submitted that Murray et al. is directed to technology so different from that of claim 1 from which claim 12 depends that the disclosure in Mao et al. of cursive text recognition is insufficient to suggest to one of ordinary skill in the art how to modify Murray et al. to meet the limitations recited in claim 1. Furthermore, it is submitted that claim 1 patentably distinguishes

over Mao et al. taken by itself for the reasons recognized by the Examiner in not rejecting claim 1 as unpatentable over Mao et al. Therefore, it is submitted that claim 1 patentably distinguishes over Murray et al. and Mao et al.

Regardless of whether the additional limitations recited in claims 12-14 are disclosed by Mao et al., it is submitted that claims 12-14 patentably distinguish over the combination of Murray et al. and Mao et al. due to the limitations recited in claim 1 from which claims 12-14 depend.

Claim 18 has been amended in a manner similar to claim 20 to recite that the word recognition unit recognizes "individual character images in an image of a character string to identify a word" (claim 18, lines 2-3). As discussed above, Murray et al. does not teach or suggest such recognition. The Examiner has not cited what, if anything, in Mao et al. teaches or suggests such recognition. Therefore, it is submitted that claim 18 and claim 19 which depend therefrom patentably distinguishes over the cited portions of Murray et al. and Mao et al.

In item 13 on page 10 of the Office Action, claim 23 was rejected as unpatentable over Murray et al. in view of Jamali and further in view of Matsubayashi et al. Claim 23 has been amended in a manner similar to claim 21. As noted above, of the three references used to reject claim 23, only Jamali is related to "recognizing individual character images in an image of character string" (claim 23, line 11). As discussed above with respect to claims 8 and 10, nothing was cited or has been found in Jamali suggesting modification of Murray et al. to perform recognition of "individual character images in an image of a character string" (claim 23, line 11). Furthermore, it is submitted that Matsubayashi et al. contains no such suggestion either. Therefore, it is submitted that claim 23 patentably distinguishes over Murray et al. in view of Jamali and further in view of Matsubayashi et al.

Summary

It is submitted that the references cited by the Examiner, taken individually or in combination, do not reach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-24 are in a condition suitable for allowance. Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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